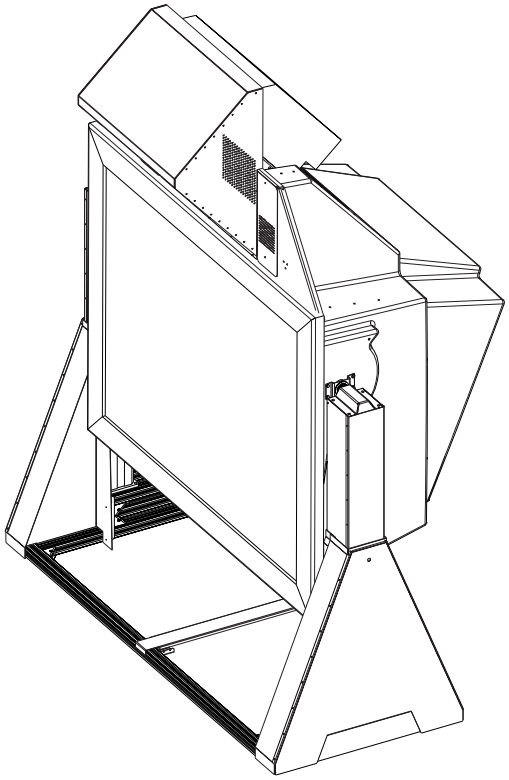


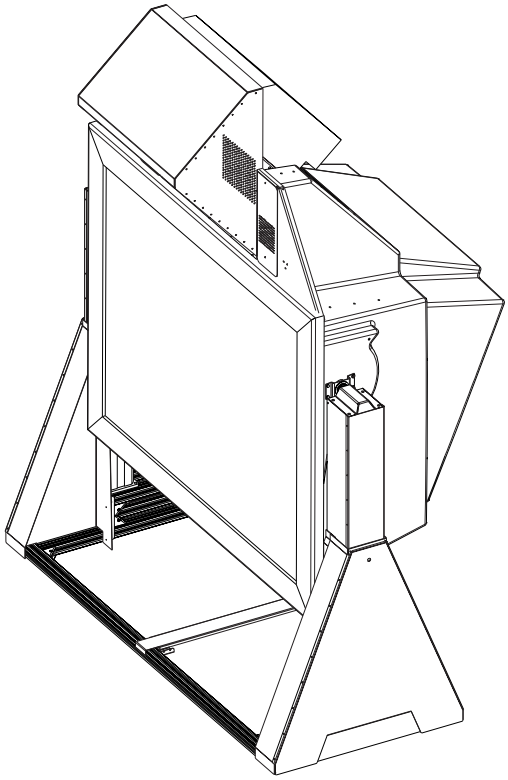
BARCO

BARON
908

R9040060
R9040069

INSTALLATION MANUAL

BARCO PROJECTION SYSTEMS



BARON
908

R9040060
R9040069

INSTALLATION MANUAL

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Due to constant research, the information in this manual is subject to change without notice.

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1 SAFETY INSTRUCTIONS

Safety instructions

Notice on safety

This equipment is built in accordance with the requirements of the international safety standards EN60950, UL 1950 and CSA C22.2 No.950, which are the safety standards of information technology equipment including electrical business equipment.

These safety standards impose important requirements on the use of safety critical components, materials and isolation, in order to protect the user or operator against risk of electric shock and energy hazard, and having access to live parts.
Safety standards also impose limits to the internal and external temperature rises, radiation levels, mechanical stability and strength, enclosure construction and protection against the risk of fire.

Simulated single fault condition testing ensures the safety of the equipment to the user even when the equipment's normal operation fails.

Installation instructions

Before operating this equipment please read this manual thoroughly, and retain it for future reference.

Installation and preliminary adjustments should be performed by qualified BARCO personnel or by authorized BARCO service dealers.

Owner's record

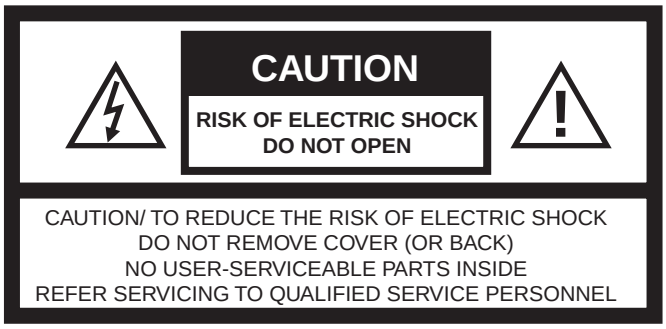
The part number and serial number are located at the back side of the projector. Record these numbers in the spaces provided below. Refer to them whenever you call upon your BARCO dealer regarding this product.

PART NUMBER :

SER. NUMBER :

DEALER :

Safety indication on the product


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION/ TO REDUCE THE RISK OF ELECTRIC SHOCK
DO NOT REMOVE COVER (OR BACK)
NO USER-SERVICEABLE PARTS INSIDE
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL

The lightning flash with an arrowhead within a triangle is intended to tell the user that parts inside this product may cause risk of electrical shock to persons.

The exclamation point within a triangle is intended to tell the user that important operating and/or servicing instructions are included in the technical documentation for this equipment.

image 1.1
Safety indication

Safety warning

TO PREVENT FIRE OR ELECTRICAL SHOCK HAZARD, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE !

Federal communication commission (FCC Statement)

This equipment has been tested and found to comply with the limits of a class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Note :

The use of shielded cables is required to comply within the limits of Part 15 of FCC rules and EN55022.

* All the safety and operating instructions should be read before using this unit.

* The safety and operating instructions manual should be retained for future reference.

* All warnings on the equipment and in the documentation manuals should be adhered to.

* All instructions for operating and use of this equipment must be followed precisely.

On safety

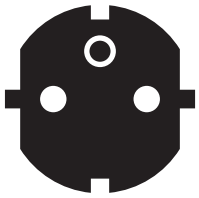
1. This product should be operated from an AC power source.
Power input is autoranging from 90 V to 230V.

2. All equipment in the system is equipped with a 3-wire grounding plug, a plug having a third (grounding) pin. This plug will only fit into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the purpose of the grounding-type plug.

WARNING FOR THE CUSTOMERS: THIS APPARATUS MUST BE GROUNDED (EARTHED) via the supplied 3 conductor AC power cable.

If the supplied power cable is not the correct one, consult your dealer.

The wires of the mains lead are colored in accordance with the following code.



CEE 7 Plug
Green and yellow : Ground
Blue : Neutral
Brown : Line

ANSI 73.11 Plug
Green and yellow : Ground
White : Neutral
Black : Line

image 1.2
Power cord plugs

3. Do not allow anything to rest on the power cord. Do not locate this product where persons will walk on the cord. To disconnect the cord, pull it out by the plug. Never pull the cord itself.

4. If an extension cord is used with this product, make sure that the total of the ampere ratings on the products plugged into the extension cord does not exceed the extension cord ampere rating.

5. Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a risk of fire or electrical shock.

Never spill liquid of any kind on the product. Should any liquid or solid object fall into the cabinet, unplug the set and have it checked by qualified service personnel before resuming operations.

6. Lightning - For added protection for this video product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet. This will prevent damage to the projector due to lightning and AC power-line surges.

Caution on fire hazard

DO NOT PLACE FLAMMABLE OR COMBUSTIBLE MATERIALS NEAR PROJECTOR !

BARCO large screen projection products are designed and manufactured to meet the most stringent safety regulations. This projector radiates heat on its external surfaces and from ventilation ducts during normal operation, which is both normal and safe.
Explosing flammable or combustible materials into close proximity of this projector could result in the spontaneous ignition of that material, resulting in a fire. For this reason, it is absolutely necessary to leave an "exclusion zone" around all external surfaces of the projector whereby no flammable or combustible materials are present. The exclusion zone must be not less that 10 cm (4") for Barco Retro Projectors. Do not cover the projector with any material while the projector is in operation.
Keep flammable and combustible materials away from the projector at all times. Mount the projector is a well ventilated area away from sources of ignition and out of direct sun light. Never expose the projector to rain or excessive moisture. In the event of fire, use sand, CO_2, or dry powder fire extinguishers; never use water on an electrical fire.
Always have service performed on this projector by authorized BARCO service personnel. Always insist on genuine BARCO replacement parts. Never use non-BARCO replacement parts as they may degrade the safety of this projector.

On installation

1. Do not place this equipment on an unstable cart, stand, or table. The product may fall, causing serious damage to it.

2. Do not use this equipment near water.

3. Slots and openings in the cabinet and the back or bottom are provided for ventilation; to ensure reliable operation of the product and to protect it from overheating, these openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should never be placed near or over a radiator or heat register.

   The projector should not be placed in a built-in installation or enclosure unless proper ventilation is provided.

4. Do not block the projector cooling fans or free air movement under and around the projector. Loose papers or other objects may not be nearer to the projector than 4" on any side.

On servicing

Do not attempt to service this product yourself, as opening or removing covers may expose you to dangerous voltage potentials and risk of electric shock!

Refer all servicing to qualified service personnel.

Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:

a. When the power cord or plug is damaged or frayed.
b. If liquid has been spilled into the equipment.
c. If the product has been exposed to rain or water.
d. If the product does not operate normally when the operating instructions are followed.
   Note : Adjust only those controls that are covered by the operating instructions since improper adjustment of the other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal operation.
e. If the product has been dropped or the cabinet has been damaged.
f. If the product exhibits a distinct change in performance, indicating a need for service.

Replacement parts - When replacement parts are required, be sure the service technician has used original BARCO replacement parts or authorized replacement parts which have the same characteristics as the BARCO original part. Unauthorized substitutions may result in degraded performance and reliability, fire, electric shock or other hazards. Unauthorized substitutions may void warranty.

Safety check - Upon completion of any service or repairs to this projector, ask the service technician to perform safety checks to determine that the product is in proper operating condition.

On cleaning

Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

- To keep the cabinet looking brand-new, periodically clean it with a soft cloth. Stubborn stains may be removed with a cloth lightly dampened with mild detergent solution. Never use strong solvents, such as thinner or benzine, or abrasive cleaners, since these will damage the cabinet.
- To ensure the highest optical performance and resolution, the projection lenses are specially treated with an anti-reflective coating, therefore, avoid touching the lens. To remove dust on the lens, use a soft dry cloth. Do not use a damp cloth, detergent solution, or thinner.

On repacking

Save the original shipping carton and packing material; they will come in handy if you ever have to ship your equipment. For maximum protection, repack your set as it was originally packed at the factory.

On illumination

In order to obtain the best quality for the projected image, it is essential that the ambient light which is allowed to fall on the screen be kept to an absolute minimum.

When installing the projector and screen, care must be taken to avoid exposure to ambient light directly on the screen. Avoid adverse illumination on the screen from direct sunlight or fluorescent lighting fixtures.
The use of controlled ambient lighting, such as incandescent spot light or a dimmer, is recommended for proper room illumination. Where possible, care should also be taken to ensure that the floors and walls of the room in which the projector is to be installed are non-reflecting, dark surfaces. Brighter surfaces will tend to reflect and diffuse the ambient light and hence reduce the contrast of the projected image on the screen.

2 PACKING AND DIMENSIONS

Unpacking

Unpacking

To open the banding around the carton, pull out the clip as shown below.

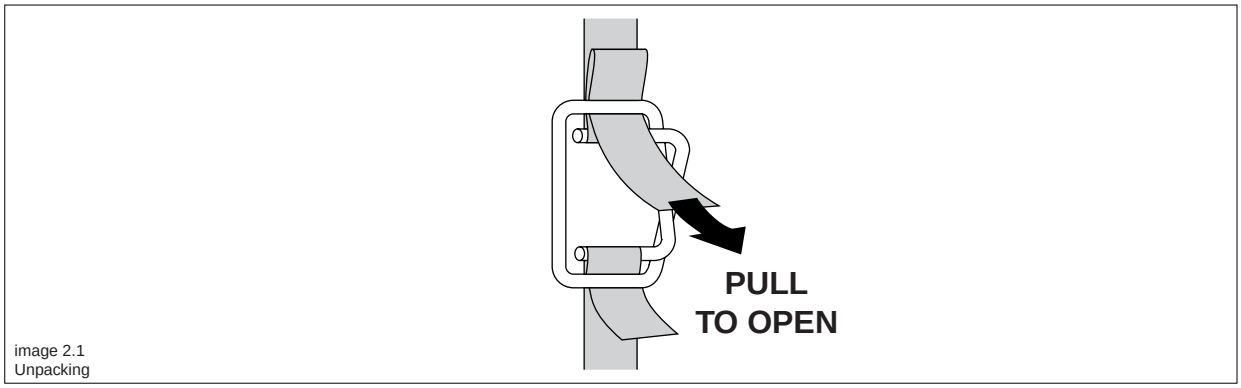


image 2.1
Unpacking

Take the mirror cabinet, projector, projector cover and screen assembly the out of its shipping carton.
The projector is fixed on a wooden plate with 4 M6 screws. The projector is fixed on a wooden plate with 4 M6 screws.
Be aware of the weight of the projector: 60 kg (128 lbs).
To carry the contents, 2 persons are needed.

Repacking

Save the original shipping carton and packing material, which will come in handy if you ever have to ship your projector. For maximum protection, repack your projector as it was originally packed at the factory, use a pair of thongs to tighten the banding.

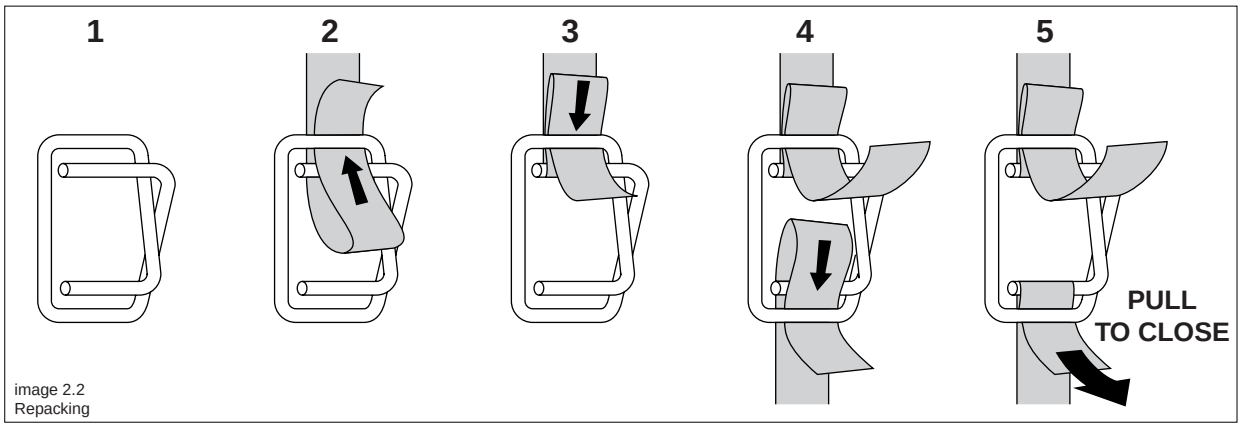


image 2.2
Repacking

Contents of the shipping carton

1 RETRO BLOCK REALITY 908 projector + power cord
1 Mirror cabinet + rotation pins
1 Screen assembly + fixation hand blots
1 Projector cover + bolts
1 Local controller
1 Remote control unit + 2 batteries (1.5V)
1 Owner's manual
1 Installation manual

Baron dimensions in mm (inch)

Remarks:

1 The dimensions are related to the position of the projection table, this table is motorized and fully tiltable between 0° en 90° (image 2.3).
2 A disassembled Baron can be moved through a doorway (Appendix B), tilting the mirror cabinet in the vertical position and removing the control box minimizes the width to 764 mm (30.08 inch).

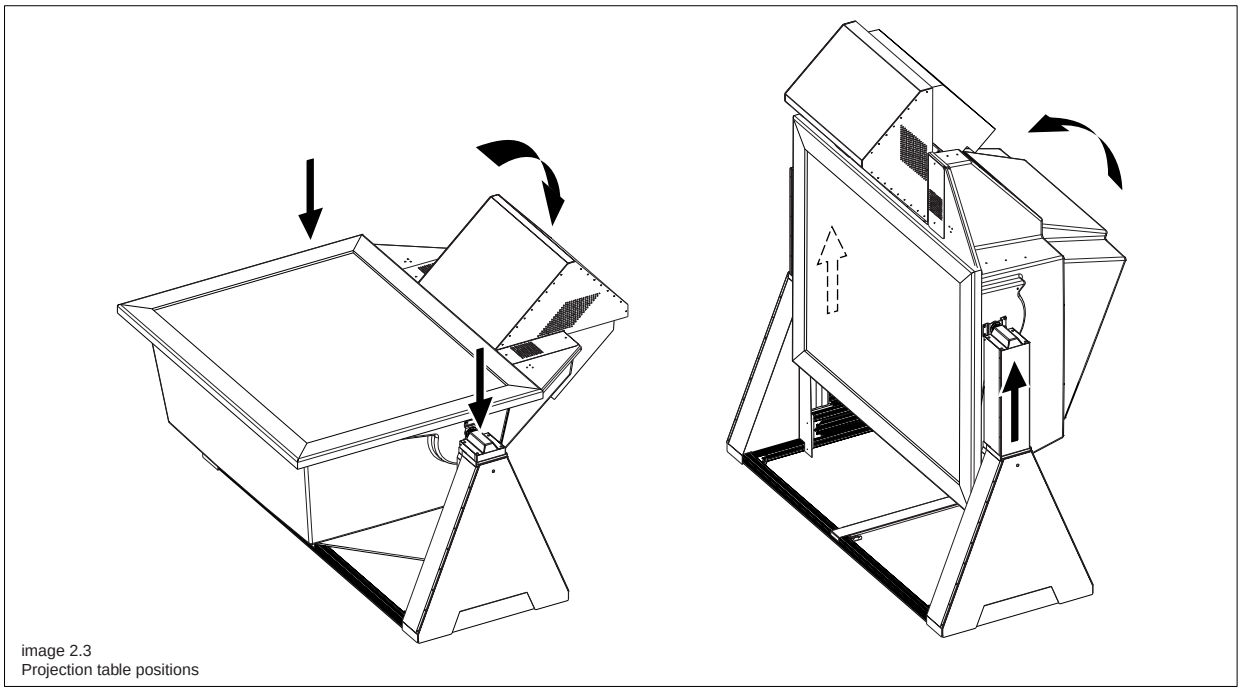


image 2.3
Projection table positions

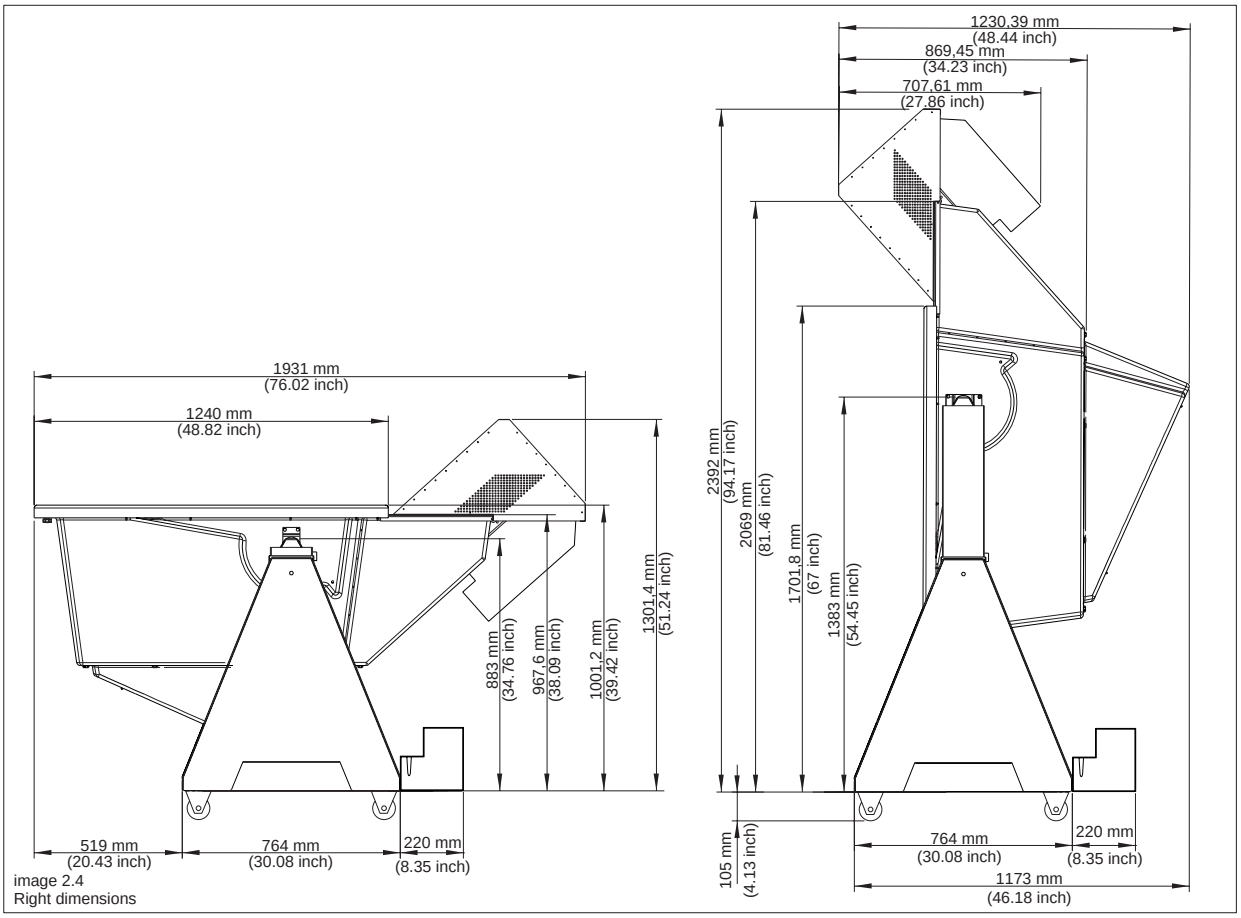


image 2.4
Right dimensions

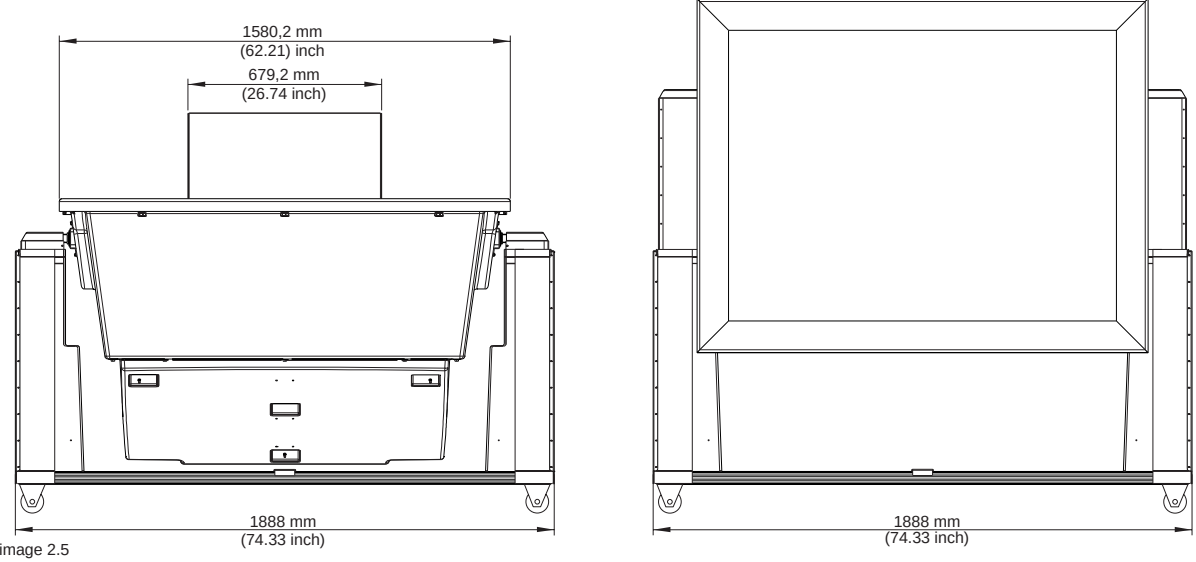


image 2.5
Front dimensions

3 INSTALLATION GUIDELINES

Installation guidelines

Ambient temperature conditions

Careful consideration of things such as image size, ambient light level, projector placement and type of screen to use are critical to the optimum use of the projection system.
Operation temperature :
Max. ambient temperature : 40 °C (104°F)
Min. ambient temperature : 0 °C (32°F).
The projector will not operate if ambient air temperature falls outside this range (0°C- 40°C) (32°F-104°F).
Storage temperature : -35 °C to + 65 °C (-25.6°F to 149°F)

Humidity conditions

Storage : 0 - 98% RH Non-condensing
Operation : 0 - 95% RH Non-condensing

Environment

Do not install the projection system in a site near heat sources such as radiators or air ducts, or in a place subject to direct sunlight, excessive dust or humidity. Be aware that room heat rises to the ceiling; check that temperature near the installation site is not excessive.

Environment condition check

Warning: Harmful Environmental Contamination Precaution

A projector must always be mounted in a manner which ensures the free flow of *clean air* into the projectors ventilation inlets. For installations in environments where the projector is subject to airborne contaminants such as that produced by smoke machines or similar (these deposit a thin layer of greasy residue upon the projectors internal optics and imaging electronic surfaces, degrading performance), then it is highly advisable and desirable to have this contamination removed prior to it reaching the projectors clean air supply. Devices or structures to extract or shield contaminated air *well* away from the projector are a prerequisite, if this is not a feasible solution then measures to relocate the projector to a clean air environment should be considered.

Only ever use the manufactures recommended cleaning kit which has been specifically designed for cleaning optical parts, never use industrial strength cleaners on a projectors optics as these will degrade optical coatings and damage sensitive optoelectronic components. Failure to take suitable precautions to protect the projector from the effects of persistent and prolonged air contaminants will culminate in extensive and irreversible ingrained optical damage. At this stage cleaning of the internal optical units will be noneffective and impracticable. Damage of this nature is under no circumstances covered under the manufactures warranty and may deem the warranty null and void. In such a case the client shall be held solely responsible for all costs incurred during any repair. It is the clients responsibility to ensure at all times that the projector is protected from the harmful effects of hostile airborne particles in the environment of the projector. The manufacture reserves the right to refuse repair if a projector has been subject to wilful neglect, abandon or improper use.

Ambient light

The ambient light level of any room is made up of direct or indirect sunlight and the light fixtures in the room. The amount of ambient light will determine how bright the image will appear. So, avoid direct light on the screen as much as possible.

Windows that face the screen should be covered by opaque drapery while the set is being viewed. It is desirable to install the projecting system in a room whose walls and floor are of non-reflecting material. The use of recessed ceiling lights and a method of dimming those lights to an acceptable level is also important. Too much ambient light results in a ‘wash out’ of the projected image. This appears as less contrast between the darkest and lightest parts of the image. With bigger screens, the ‘wash out’ becomes more important. As a general rule, darken the room to the point where there is just sufficient light to read or write comfortably. Spot lighting is desirable for illuminating small areas so that interference with the screen is minimal.

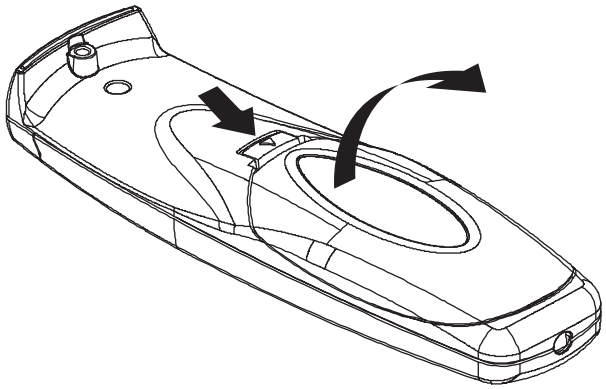
Battery installation in the RCU

How are the batteries delivered ?

Two batteries are packed together with the power cord. Before using your RCU, install first these batteries.

How to install ?

1 Remove the battery cover on the backside by pushing the handle a little towards the bottom of the RCU (image 3.1).
2 Lift up the top side of the cover at the same time (image 3.1).
3 Insert the batteries as indicated in the RCU (image 3.1).
4 Put the battery cover on its place.



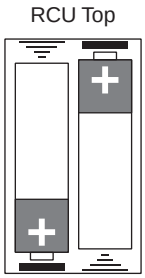


image 3.1
RCU Battery installation

4 INSTALLATION SETUP

Remark:
Be sure that the mirror cabinet is tilted in its initial horizontal position before proceeding with the following procedures.

Mounting the projector

Hanging the projector into the mirror cabinet

Remark: Be aware of the weight of the projector 60 kg (132 lbs), to carry the projector 2 people are needed.

1 The U-shaped supports (image 4.1) on each side of the projector will be holding up the projector when hanging it into the mirror cabinet.
2 Hang the projector upside down (with the lenses towards the cabinet and the RCU facing downwards) into the mirror cabinet.
3 Make sure that the rotation pin holes coincide (image 4.1).

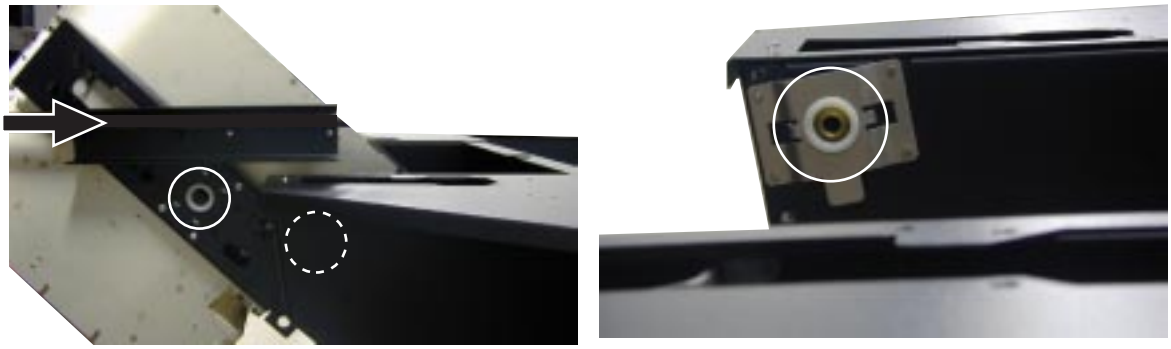


image 4.1
Hanging the projector into the mirror cabinet

Attaching the projector with the rotation pins

1 Attach the projector by turning the rotation pins (image 4.2).

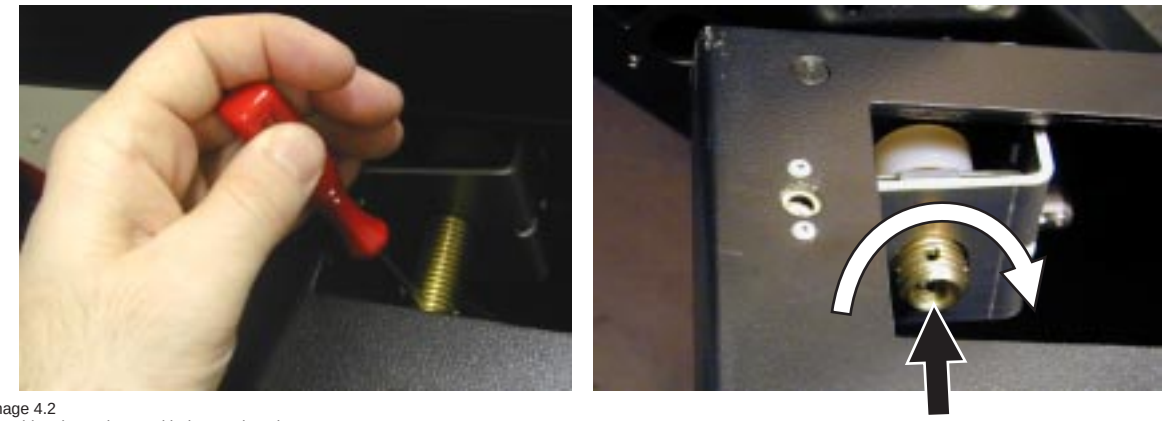


image 4.2
Attaching the projector with the rotation pins

Securing the correct position of the projector

1 Loosen the 2 bolts (these can be damaged while removing due to the weight of the projector) and remove the supports (image 4.3).
2 Secure the correct projector position by rotating the projector a little to the front and to the back until the locks jump in their position (image 4.3).
3 Remove the 3 lens covers.

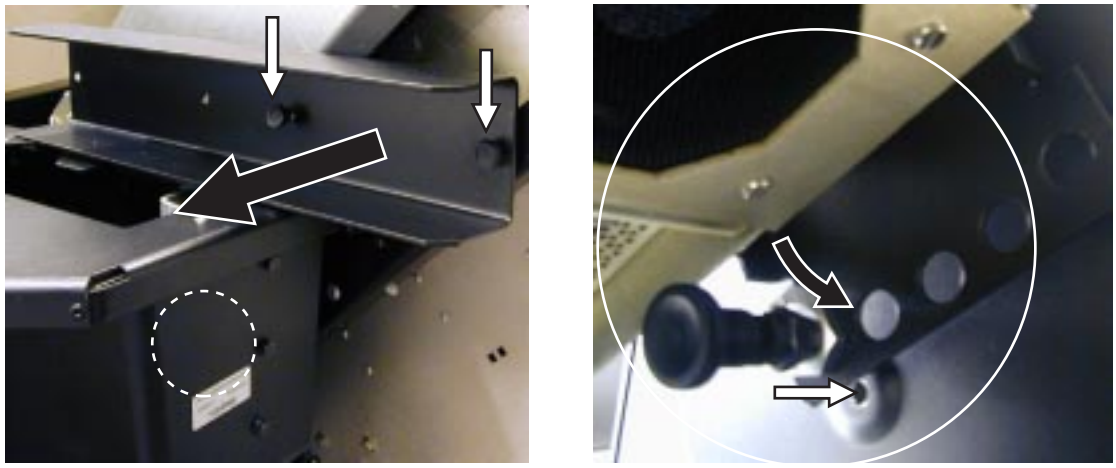


image 4.3
Securing the correct position of the projector

Mounting the screen

Putting the screen on the mirror cabinet

1 On the backside of the screen is a hose, this will be connected to the hose inside the mirror cabinet (image 4.4).
2 Put the screen assembly (With the Barco logo pointing away from the projector) on the mirror cabinet in a way you still can connect the hose (image 4.4).
3 When this is done, put the screen in the correct position, covering the mirror cabinet.

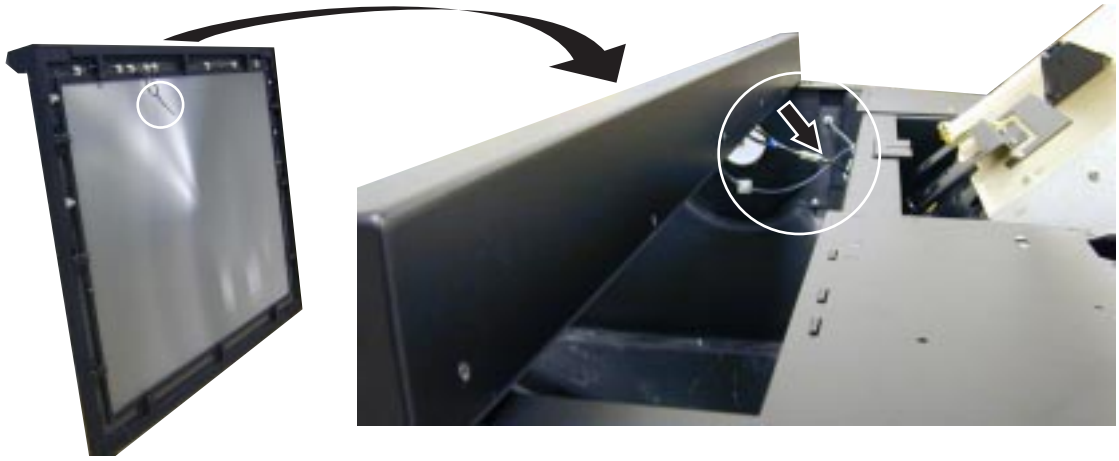


image 4.4
Putting the screen on the mirror cabinet

Attaching the screen to the mirror cabinet

1 Turn in 2 fixation hand bolts (image 4.5) on the front of the projector (image 4.5).
2 Loosen the locks (described above) and rotate the projector (image 4.5), this makes it easier to turn in the fixation hand bolt on the top side of the screen (image 4.5).
3 Rotate the projector back in its correct position until the locks jump in their position.

image 4.5
Attaching the screen

Mounting the projector cover

1 Put the black cover on the projector (image 4.6).
2 Secure it with 2 bolts on each side (image 4.6).

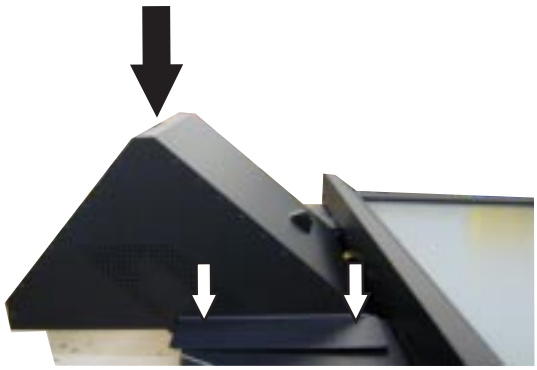


image 4.6
Mounting the projector cover

Disassembling the baron

To disassemble the baron repeat the procedures above in the reverse order.

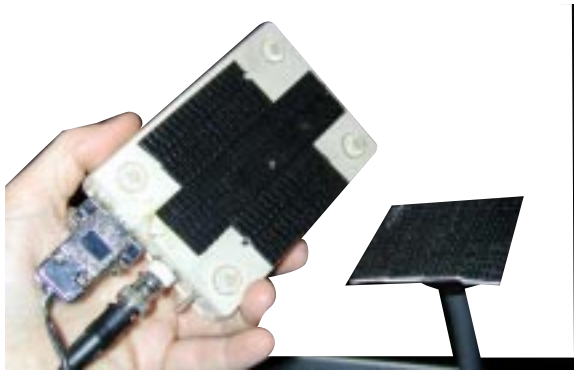
Screen protection

When the Baron is not in use the screen can be protected by pulling down the screen cover (image 4.7).

image 4.7
Protection screen

Mounting 3D emitters

1 3D emitter supports are mounted on both sides of the mirror cabinet (image 4.8).
2 Put a piece of velcro on the supports and the bottomside of the 3D emitters (image 4.8).
3 Attach the emitters to the supports (image 4.8).



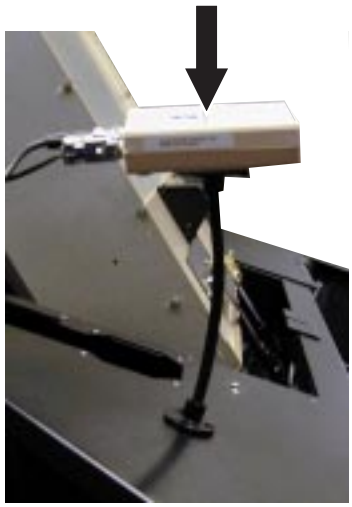


image 4.8
Mounting 3D emitters

5 AC POWER CONNECTIONS

AC Power cords

AC Power cord connections

1 Loosen the 2 screws and remove the protection plate of the control box (image 5.1).
2 Use the supplied power cord to connect the projector to the power strip (image 5.1).
3 Connect the power cord of the power strip to the wall outlet (image 5.1).

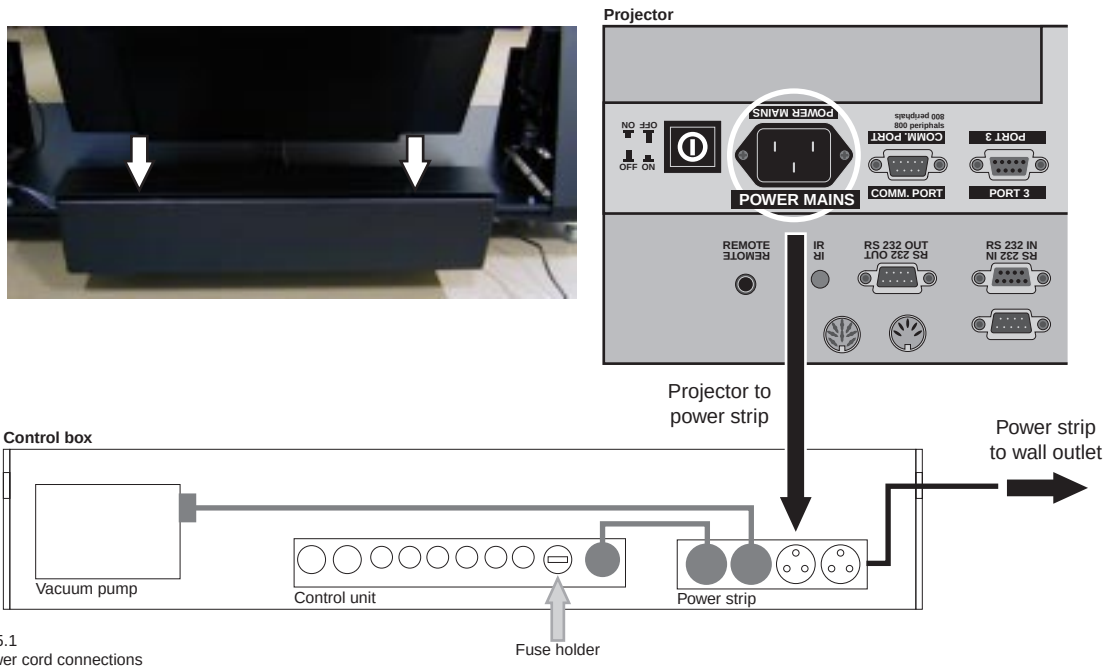


image 5.1
AC Power cord connections

Preparing the power cord

As the colors of the wires in the mains lead of this apparatus may not correspond with the colored markings identifying the terminals in your plug, proceed as follows:

1 The yellow/green wire is ground and must be connected to the terminal in the plug which is marked by the letter E or colored yellow and green.
2 The blue (white) wire is neutral and must be connected to the terminal marked with the letter N or colored black.
3 The brown (black) wire is the line and must be connected to the terminal marked with the letter L or colored red.

CEE 7 Plug
Green and yellow : Ground
Blue : Neutral
Brown : Line

ANSI 73.11 Plug
Green and yellow : Ground
White : Neutral
Black : Line

image 5.2
Power cord plugs

AC Power

The power voltage

The power input voltage of the 908 projector is autoranging between 100V (-10%) and 240V (+6%).

The power input voltage of the vacuum pump and controller unit is not autoranging and will depend on the ordered Baron:
230V Baron (R9040060)
120V Baron (R9040069)

Fuses

The following fuses are used inside the projector (these fuses are located behind the power switch 5.2):
2x T10A (Order number R314521)
1x F10A (Order number R314155)

The following fuse is used inside the control unit (image 5.1):
On a 230V Baron 908 (R9040060) = 230V Control Unit: 1x T1,25A (K314149)
On a 120V Baron 908 (R9040069) = 120V Control Unit: 1x T2,5A (V3141589)

For continued protection against fire hazard: replace with the same type of fuse and refer replacement to qualified service personnel.

Switching on the projector

Switching on

The projector is switched ON and OFF using the power (mains) switch.

Pressed : ON
Not pressed : OFF

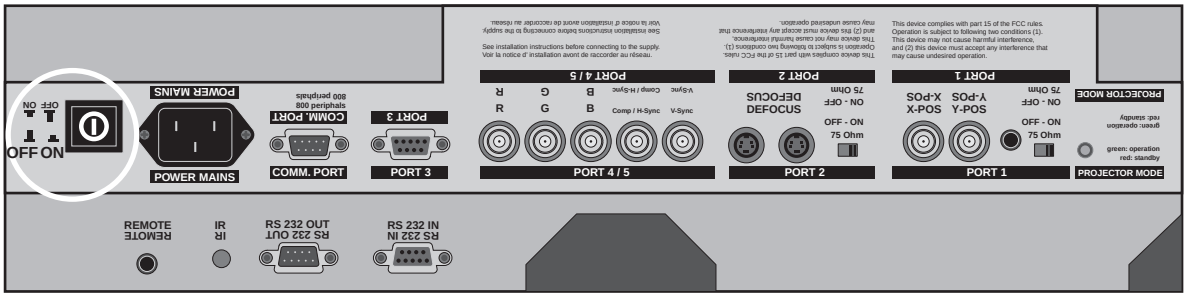


image 5.3
Power switch

Stand by indication lamp :

No light up : projector switched off
Green color : projector in Operational mode
Red color : projector is in Standby mode.

When switching on with the power switch, the projector can start now in :

1 Operational mode (picture displayed)
2 Stand by mode

The way of start up depends on the 'Power up' setting in the service mode.

Switching off

Use the same power switch to switch off the projector.

Start up in operational mode

The projector can start up with the selected source or
the projector can start up with a warm up cycle message (menu 1).

PROJECTOR WARM UP
A FULL WHITE PATTERN WILL BE GENERATED FOR x MIN.
FOR IMMEDIATE USE OF THE PROJCTOR, PRESS <EXIT>
WARNING : SKIPPING THIS PROCEDURE CAN REDUCE THE INITIAL PICTURE QUALITY OF THE PROJECTED IMAGE;
YOU CAN ADJUST THE IMAGE DIMENSTIONS WITH THE ARROW KEYS TO AVOID SCANNING ON THE EDGES OF THE CRT'S;
THIS OPTION CAN BE DISABLED IN THE SERVICE MENU
with <ENTER>
<EXIT> to return
menu1

When this warm up cycle message appears on the screen, the menu offers the possibility to start with a x minutes taking warm up period (press **ENTER**) or to skip this cycle (press **EXIT**). The x minutes and the horizontal frequency can be programmed in the 'Service mode' under the item 'Projector Set Up'.
Note : This warm up period is built in so that the projector can reach its maximum specifications.

When starting this warm up period, a full white image is shifted on the CRT faceplate to avoid a burn in.
Every 30 seconds a text box will be displayed in another place on the screen with the remaining time to go.
The image dimensions can be adjusted with the cursor keys to avoid scanning on the edges of the CRT's.
To interrupt the warm up period, handle as follow:

1 Press **EXIT**, the warm up menu will be redisplayed with the remaining time indication.
2 Press **EXIT** again to quit the warm up cycle and to display the source.

Start up in stand by mode

The projector starts up in stand by.

Press a numeric key corresponding to the desired source or press STBY key.
The projector displays the selected source or the warm up cycle message.

When this warm up message appears on the screen, handle as described in 'Start up in Operational Mode'.

Stationary image warning

Do not display a stationary image with full brightness and contrast for longer than 20 min., otherwise you risk to damage the CRT's.

6 SOURCE CONNECTIONS

Input locations

Input facilities

The following source types can be connected to the inputs :

- Composite Video (Optional) (1)
- S-Video (Optional) (1)
- RGBS or RGsB
- RGB3S or RG3sB
- (R-Y)Y(B-Y)S or (R-Y)Ys(B-Y) [component input]
- (R-Y)Y(B-Y)3S or (R-Y)Y3s(B-Y) [component input]

(1) Optional Module: decoder + Limo Pro to select Composite Video or S-Video.

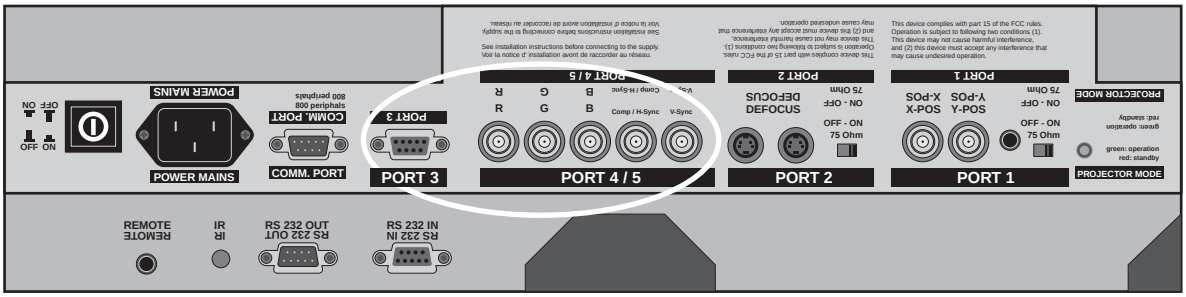


image 6.1
Inputfacilities

Which source to which input

This table (image 6.2) gives an overview of the relation between source type, input terminals and selection key on the RCU.

Port #	Projector input	Press RCU digit buttons
1	For future expansion	-
2	For future expansion	-
3	RGB[2]	3
4/5	RGB[2]	4 or 5
4/5	Component video[3]	6
4/5	RGB with tri level sync[4] (Optional)	7
4/5	Component video with tri level sync[5] (Optional)	8

2 Input signal : R, G and B with automatic sync detection between seperate sync (separate composite sync or with separate hor and vert. sync) or sync on green (composite sync).
3 Input signal : R-Y, Y and B-Y with separate composite sync or with separate hor and vert. sync or with composite sync on Y.
4 Input signal : R, G and B with separate tri level sync or with tri level sync on green.
5 Input signal : R-Y, Y and B-Y with separate tri level sync or with composite tri level sync.
* Video or S-Video : switchable in the picture tuning menu.

image 6.2
Input port, source type, RCU key table

RGB Analog source to port 3

Which signal to port 3 ?

Connect your RGB source with sync on green, composite or separate sync via an interface to Port 3.
Always use an interface (e.g. Barco Magik Interface R9828120) when a computer and local monitor have to be connected to the projector as the signal cable coming from the computer is limited to 60 cm due to interferences.
The RGB analog input accepts only sources with a horizontal frequency of 32 kHz and higher.
The Baron is installed with a decoder + Limo Pro to connect sources with horizontal frequency lower than 32 kHz.

Pin configuration D9 connector of the Analog input.

1 Not connected	4 GREEN	7 Ground RGBS
2 Ground RGBS	5 BLUE	8 Hor/comp. sync
3 RED	6 Ground RGBS	9 Vert. sync

Input selection port 3

With the RCU, press digit button 3

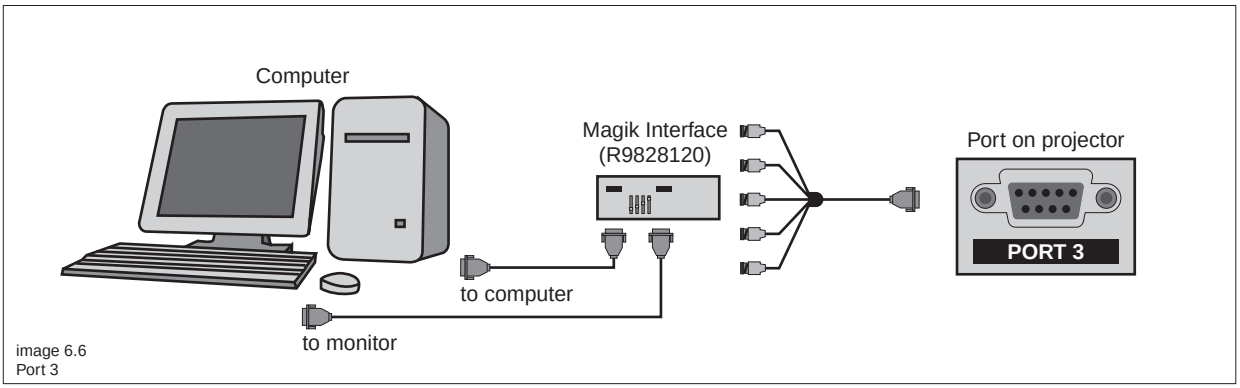


image 6.6
Port 3

Settings on module level

In the case of this second RGB input there are three different settings:

1. 75 Ω Termination resistor
2. Blue in green switch
3. Force negative sync switch

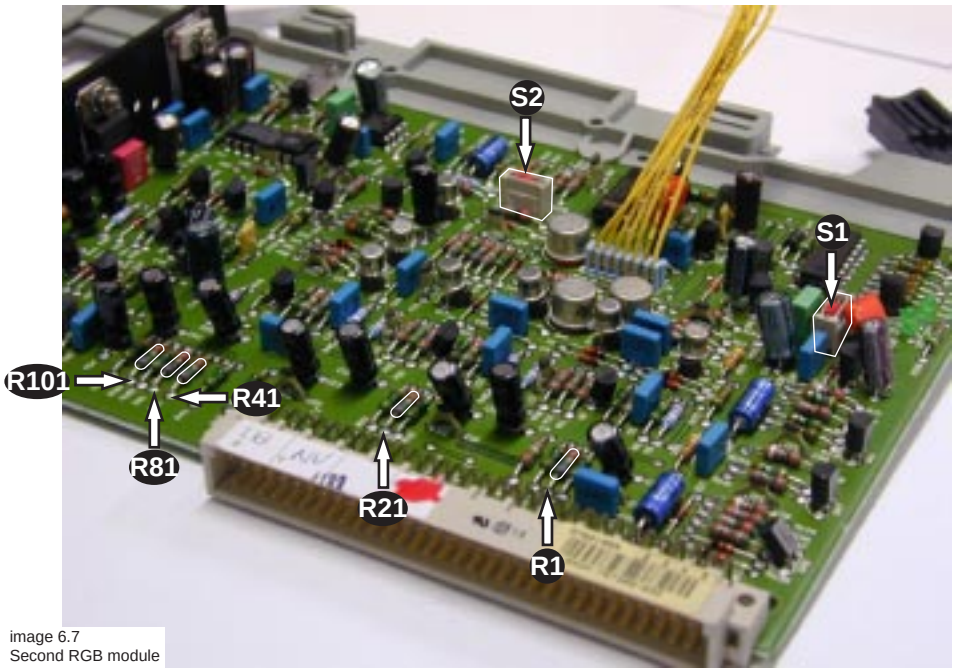


image 6.7
Second RGB module

S1 Force negative sync (ON = Yes)

S2 Blue in green (ON = Yes)

Termination resistors:

- R1 Red
- R21 Green
- R41 Blue
- R81 H-Sync
- R101 V-Sync

How to remove the second RGB module ?

When removing the second RGB module, turn off the projector and unplug the power cord from the wall outlet.

1. Loosen the two bolts on each side of the projector (image 6.8).
2. Lift up the protection plate (image 6.8).
3. The second RGB module is located in slot 4 of the main frame (image 6.8).
4. On both sides of the module, press the module lock (A image 6.8) and lift up the module handle (B image 6.8).
5. Repeat step 4 on the Limo Plus module in slot 3 to disconnect the mini-connector J2 (image 6.8) on this module.
6. Extract the second RGB module out of the main frame.
7. When finished, reconnect mini-connector J2, secure the modules and put back the protection plate.

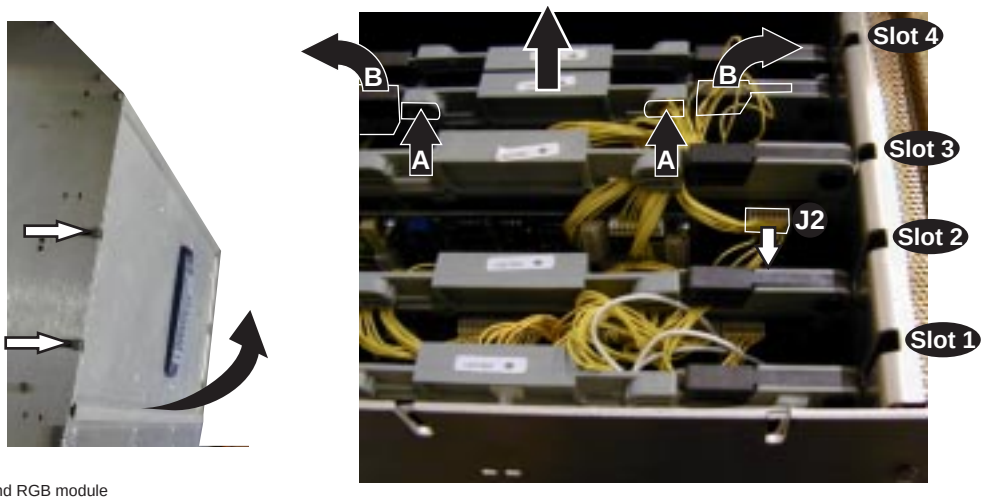


image 6.8
Removing the second RGB module

75 Ω Termination resistors

In case of chaining (loop-through) the projectors, the 75Ω line termination resistors must be removed from the second RGB Input Module when the projector is NOT the last unit in the chain.
In case of a stand-alone projector, do not remove the resistors.

75 Ω resistors on the module : line terminated.
75 Ω resistors removed : line not terminated.

Removing the termination resistors

1 Turn off the projector and unplug the projector power cord.
2 Remove the protection plate on top of the electric block.
3 Remove the RGB Input Module from the main frame.
4 Unsolder and remove the resistors.

Blue in green switch

Blue characters are difficult to read, therefore the blue text will be displayed as cyan so that the readability becomes better.

Switch in the ON position : Blue in Green active.
Switch in the OFF position : Blue in Green disabled.

Warning:

Leaving the switch in the ON position will result in abnormal color balance of the projected image.

Force negative sync switch

Switch in the ON position : the sync pulses must be negative.
Switch in the OFF position : the sync polarity will be automatically detected.

RGB Analog source with composite sync to port 4/5

Which signal to port 4/5 ?

RGB analog input terminals with separate H and V sync inputs, composite sync input or with sync on green (BNC terminals). The projector detects automatically where the sync signal is located.
Always use an interface (e.g. Barco Magik Interface 9828120) when a computer and local monitor have to be connected to the projector as the signal cable coming from the computer is limited to 60 cm due to interferences.
The RGB analog input accepts only sources with a horizontal frequency of 32 kHz and higher.
The Baron is installed with a decoder + Limo Pro to connect sources with horizontal frequency lower than 32 kHz.

RGBS or RGsB Input selection

With the RCU, press digit button 4 or 5, 4 when sync on green, 5 when separate sync.

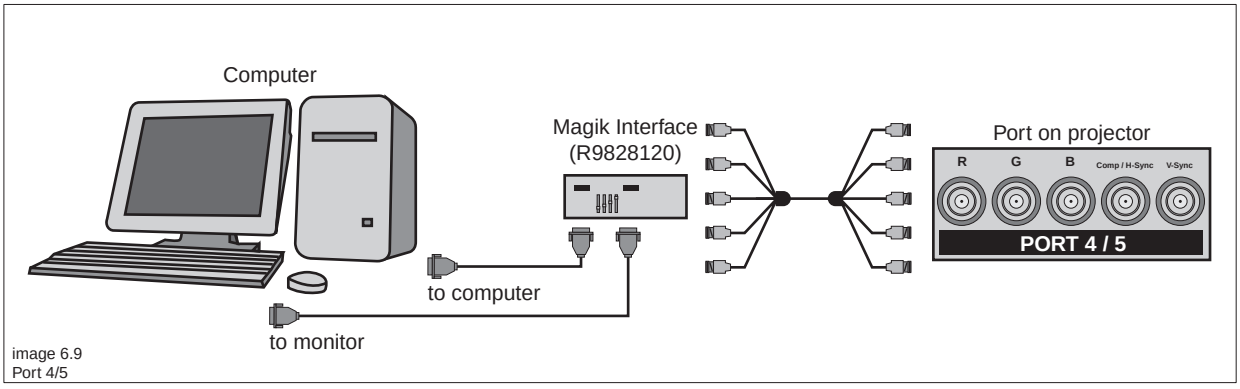


image 6.9
Port 4/5

Component video source to port 4/5

Which signal to port 4/5 ?

(R-Y)Y(B-Y) analog input terminals with sync input or with sync on the luminance (Y) input (BNC terminals). The projector detects automatically where the sync signal is located.
Always use an interface (e.g. Barco Magik Interface 9828120) when a computer and local monitor have to be connected to the projector as the signal cable coming from the computer is limited to 60 cm due to interferences.

Component video input selection

With the RCU, press digit button 6

RGB Analog source with tri level sync to port 4/5 (option)

Which signal to port 4/5 ?

RGB analog input terminals with tri level sync input or with tri level sync on green (BNC terminals). The projector detects automatically where the sync signal is located.
This feature requires a optional tri level sync module (Order number: R9828040).

RGB3S or RG3sB input selection

With the RCU, press digit button 7

Component video source with tri level sync to port 4/5 (option)

Which signal to port 4/5 ?

Component video with tri level sync input can be connected to the projector via port 4/5. The projector detects automatically where the sync signal is located.
This feature requires a optional tri level sync module (Order number: R9828040).

(R-Y)Y(B-Y)3S or (R-Y)Y3s(B-Y) input selection

With the RCU, press digit button 8.

RS232 Connection

RS232 input and RS232 output of the projector

The projector is equipped with a RS232 port that allows them to communicate with a computer.

Applications

a) remote control:
- easy adjustment of the projector via a computer.
- allow storage of multiple projector configurations and set ups.
- wide range of control possibilities.
- address range from 0 to 255.

b) data communications:
- sending data to the projector or copying the data from the projector to a hard memory device.

Set up of the baud rate for communication with a computer

See 'Changing the baud rate' in chapter 'Service mode'.

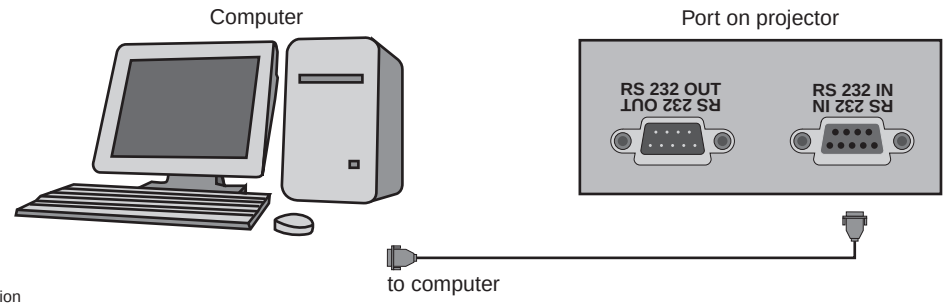


image 2.10
RS232 Connection

Communication port for communication with peripherals

Connecting a RCVDS 05 switcher to the projector

- Up to 10 inputs (20 inputs when video and S-video) with the RCVDS 05 switcher (R9827880) and up to 90 inputs when 10 RCVDS switchers are linked via the 5-cable output modules.
- Serial communication with the projector.
- Remote control buttons on the RCVDS to control the projector (source selection and analog settings)
- The selected source number will be displayed on a 2 digit display and the selected input modules will be indicated with a LED on the rear.

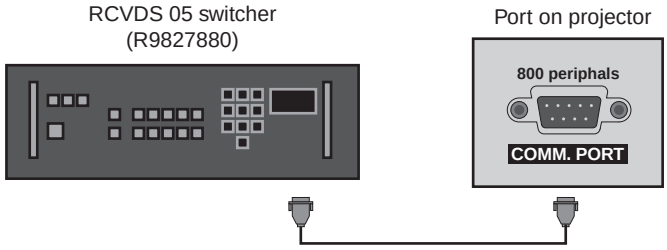


image 2.11
Communication port

7 TILTING THE PROJECTION TABLE

Tilting connections

Connecting the tilting sensors

1 Connect the Sub D9 connector with the grey cables to the corresponding projector input (image 7.1).
2 Connect the 5 pin connector to the corresponding projector input (image 7.1).
3 Connect the 8 pin connector to the control unit located in the control box (image 7.1).
4 Put the protection plate of the control box back and secure with the 2 screws.

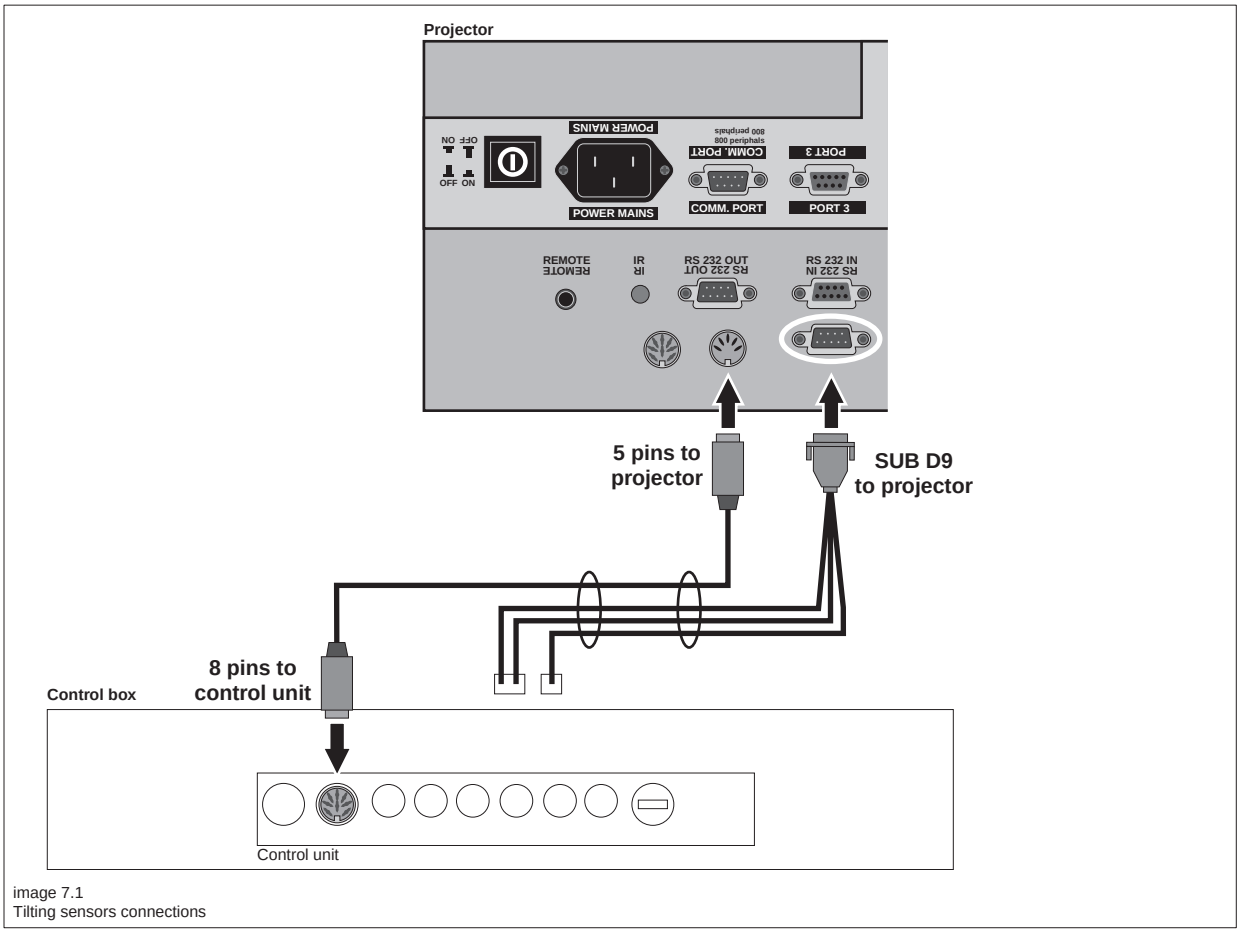


image 7.1
Tilting sensors connections

Connecting the local controller

Connect the local controller 8 pin connector to the corresponding projector input (image 7.2).

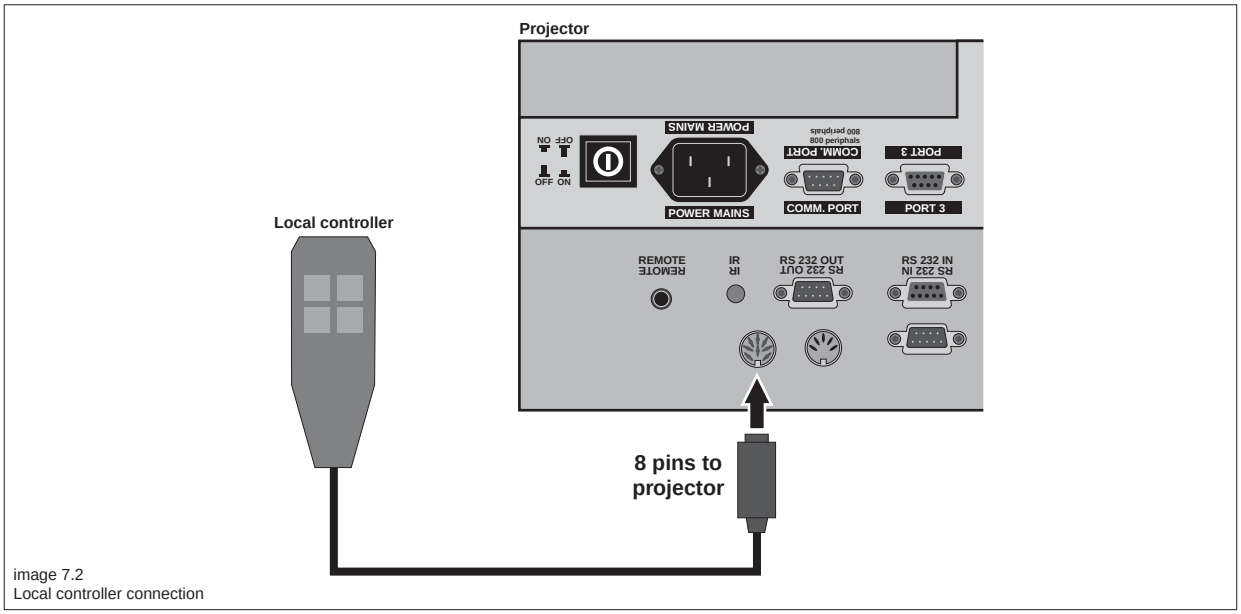


image 7.2
Local controller connection

Tilting the projection table

Safety zones

When tilting the projection table, the shaded area (image 7.3) has to be considered as safety area, do not stand or place anything in this area.

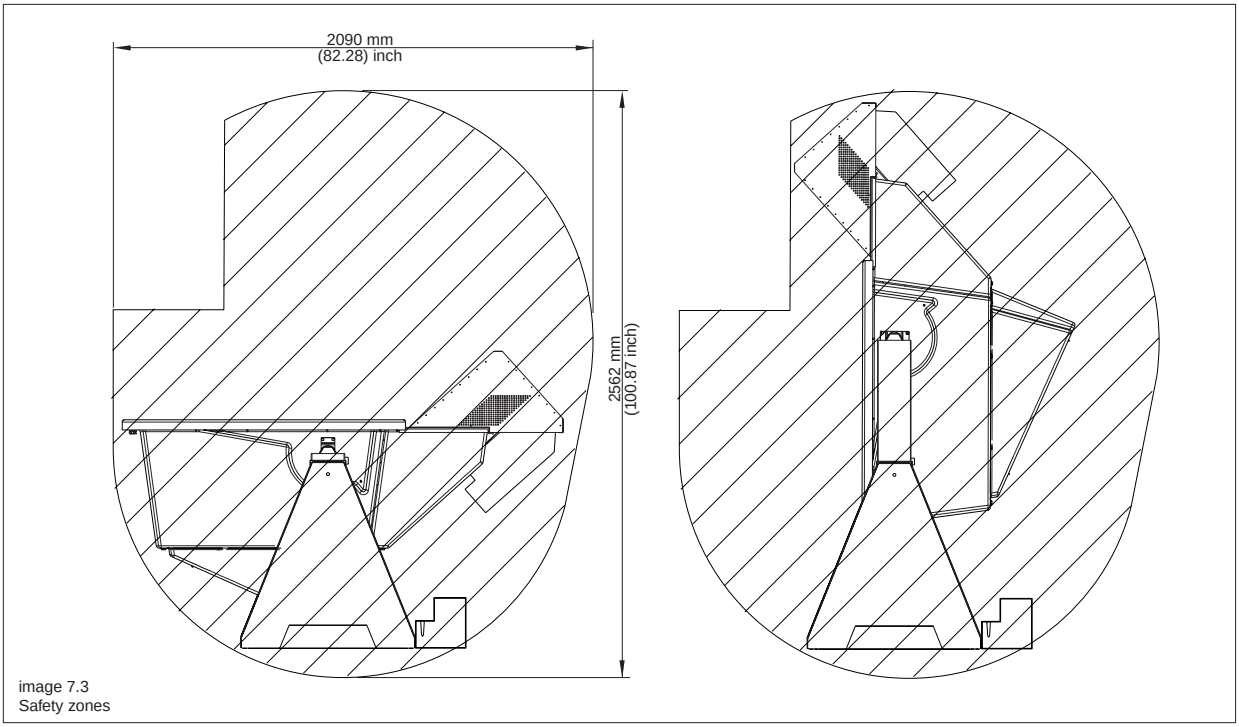


image 7.3
Safety zones

Tilting the projection table

1 Use the 4 keys on the local controller or the arrow keys on the RCU to tilt the projection table in the desired position (image 7.4).
2 The projection table height and angle are displayed on the screen (menu 1).

H: 1,50 m
D: 0 deg

menu1

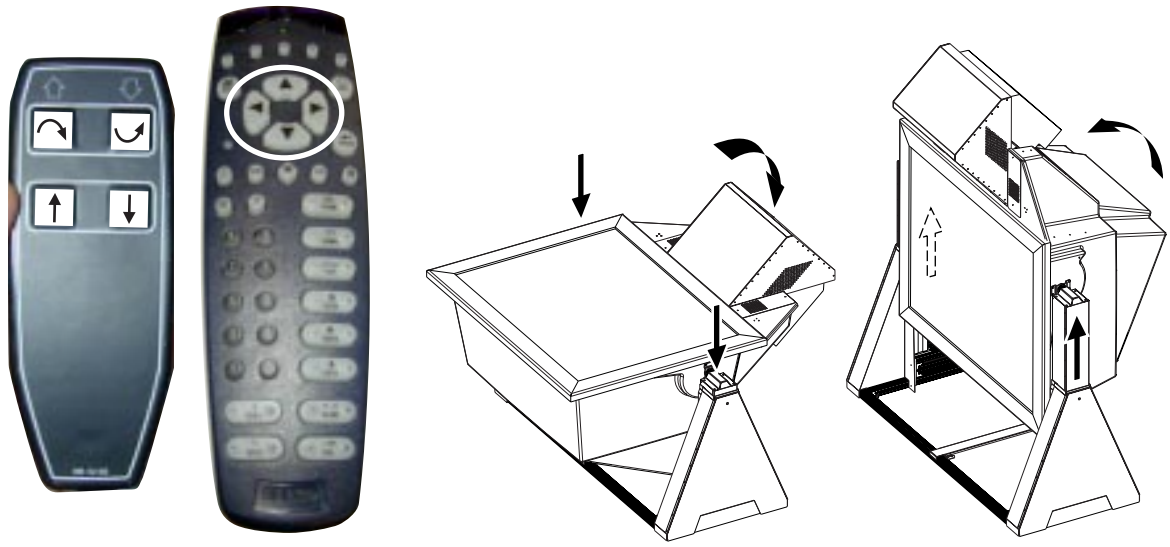


image 7.4
Tilting the projection table

Calibrating the Baron

After installation and before using the BARON, it has to be calibrated. This procedure has to be repeated every time the BARON is disassembled and reassembled.

1 Press the ADJUST key to enter the adjustment mode, the adjustment menu will appear (menu 1).
2 Highlight INSTALLATION and press **ENTER**.
3 The installation menu is displayed on the screen.
4 Push the left and right cursor keys until the projection table is horizontal, check with water level (image 7.5).
5 Push the up and down keys until the horizontal tilted projection table reaches its highest position (image 7.5).
6 Press 2 times **ENTER** to store this reference position, the BARON is ready to be used.

ADJUSTMENT MODE

Select a path from below :

RANDOM ACCESS
INSTALLATION
SERVICE

Source 01

Select with ↑ or ↓
then <ENTER>
<EXIT> to return.

menu1

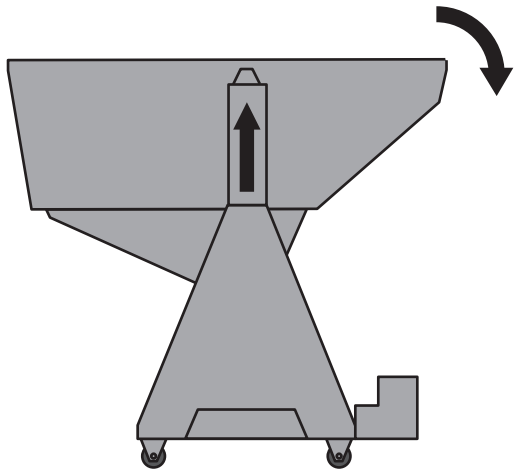


image 7.5
Calibrating the Baron

8 MESSAGES, WARNINGS AND FAILURES

INPUT 01 RGB2 Fh= 64 kHz Fv= 060 Hz	When selecting a new source, information about this source will be displayed on the screen. Source number, horizontal and vertical frequencies of the displayed source.
SOURCE 01 RGB2	Announcement of the selected source.
enter password x x x x	Message to enter your password. Password contains 4 digits.
TEXT on SOURCE 01 RGB2 xxxkHz xxHz	These messages will be displayed on the screen when pushing the TEXT key. Text ON : the *'bar scale indication'* will be enabled during the change of an analog control in the *'operational mode'* + all warnings and failures will be displayed.
TEXT off	Text OFF : the *'bar scale indication'* will be disabled during the change of an analog control in the *'operational mode'* + all warnings and failures will not be displayed.
PROJECTOR ADDRESS : 003	Indication of the projector address when activating the *'ADDRESS'* button on the RCU with a pencil or other small object.
WARNING : input not available	When using the projector with the RCVDS, this warning will be displayed when selecting an input slot of an RCVDS where the input board is missing.
WARNING : source not available	The input is a valid input but the source is not connected to the input terminals or the input source is switched off.
WARNING : invalid key entry	When a wrong key is pressed on the RCU.

WRONG PASSWORD !!!	Message when the entered password is wrong.
WARNING : end of ad- just range	End of adjustment range.
WARNING : input no longer available	The input source is no longer available.
WARNING : RCVDS not available	The input source selector is not available.
WARNING : invalid frequency input	The entered frequency or applied frequency of the source is out of the projector's range.
WARNING : permanent BOOST mode in use !!!	The CRT drive mode is switched to permanent boost.
WARNING : Option not installed !	Option not installed. e.g. Video selected but no decoder installed.
FAILURE I2C error addr. : 7FH3	Hardware failure. Call a qualified service technician for repair.
FAILURE short circuit on I2C bus	Hardware failure. Call a qualified service technician for repair.

FAILURE **RCVDS communication error**	Serial communication error between the RCVDS and the projector.
FAILURE **invalid input**	Input not valid
FAILURE **PC communication error**	Error in the communication between the projector and the PC.
FAN FAILED **Projector will switch off**	Projector switched off due to a fan fail.

A GAMMA CORRECTIONS

Gamma corrections

Gamma warning

When entering the gamma corrections, a warning will be displayed (menu 1) :

"RISK OF INCORRECT ADJUSTMENT OF THE PROJECTOR.
THE GAMMA CORRECTIONS ARE FACTORY ADJUSTED USING AN ACTAS COLOR ANALYZER ! THEREFORE, ONLY QUALIFIED INSTALLATION OR SERVICE PERSONNEL SHOULD PERFORM THESE ADJUSTMENTS ! "

If you are qualified, press **ENTER** to continue.

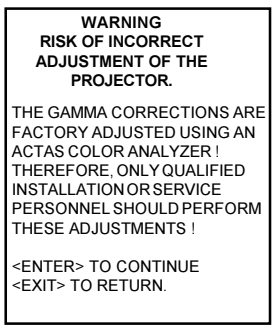
Procedure for gamma corrections

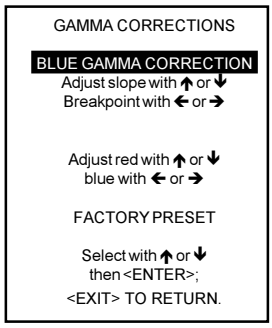
There are three settings in the gamma correction menu (menu 2):

1 Blue gamma correction.
2 R&B midlights.
3 Factory preset.

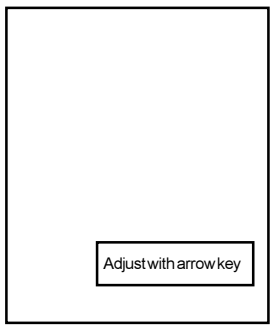
To carry out the Blue Gamma Correction:

1 Push the cursor key ↑ or ↓ to highlight the item R&B MIDLIGHTS in the menu and then press the **ENTER** key. (If the **EXIT** key is pressed, the projector will return to the SERVICE menu).
2 After the **ENTER** key is pressed, a text box with the message ADJUST WITH ARROW KEY, will be displayed on the screen (menu 3).
3 Push the cursor key ↑ or ↓ to adjust the slope, a text box with a bar scale (Min to Max) will be displayed to visualize the magnitude of the correction (menu).
4 Push the cursor key ← or → to adjust the break point, a text box with a numeric bar scale (0-99) will be displayed to visualize the magnitude of the correction (menu 5).
5 Press the **ENTER** key to return to the GAMMA CORRECTIONS menu.

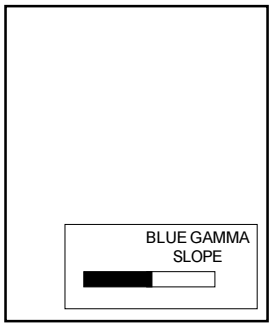

WARNING
RISK OF INCORRECT ADJUSTMENT OF THE PROJECTOR.
THE GAMMA CORRECTIONS ARE FACTORY ADJUSTED USING AN ACTAS COLOR ANALYZER ! THEREFORE, ONLY QUALIFIED INSTALLATION OR SERVICE PERSONNEL SHOULD PERFORM THESE ADJUSTMENTS !
<ENTER> TO CONTINUE
<EXIT> TO RETURN.
menu 1



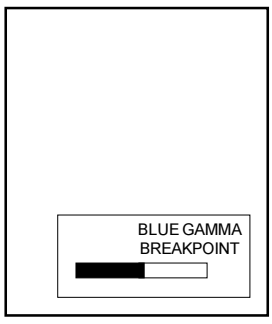
menu 2



menu 3



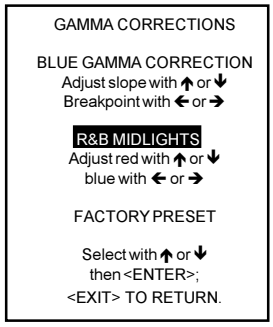
menu 4



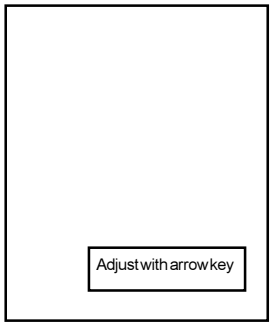
menu 5

To carry out the red and blue midlights correction:

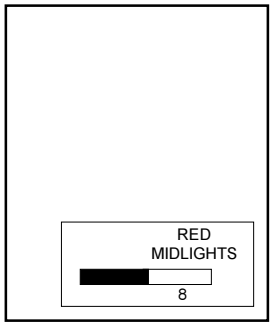
1 Push the cursor key ↑ or ↓ to highlight the item R&B MIDLIGHTS in the menu and then press the **ENTER** key.
(If the **EXIT** key is pressed, the projector will return to the SERVICE menu).
2 After the **ENTER** key is pressed, a text box with the message ADJUST WITH ARROW KEY, will be displayed on the screen (menu 2).
3 Push the cursor key ↑ or ↓ to adjust the Red Midlights, a text box with a bar scale (0-16) will be displayed to visualize the magnitude of the correction (menu 3).
4 Push the cursor key ← or → to adjust the Blue Midlights, a text box with a bar scale (0-16) will be displayed to visualize the magnitude of the correction (menu 4).
5 Press the **ENTER** key to return to the GAMMA CORRECTIONS menu.



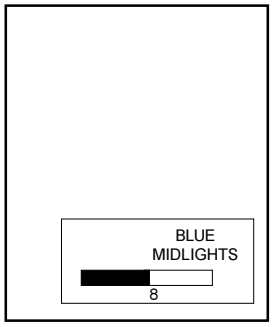
menu1



menu2



menu3



menu4

To set the parameters back to the factory preset values :

1 Push the cursor key ↑ or ↓ to highlight the item FACTORY PRESET in the menu and then press the **ENTER** key (menu 5).
Press the **EXIT** key to return to the SERVICE menu.

menu 5

B MOVING THE BARON THROUGH A DOORWAY

Remark:
We assume the Baron is in initial state as delivered: disassembled (projector+cover and screen assembly removed) and tilted horizontal.

Tilting the mirror cabinet in its vertical position

1 Loosen the 2 screws and remove the protection plate of the control box (image B.1).
2 Connect the 8 pin connector of the local controller to the control unit (image B.1).
3 Plug the power cord of the power strip to a wall outlet (image B.1).

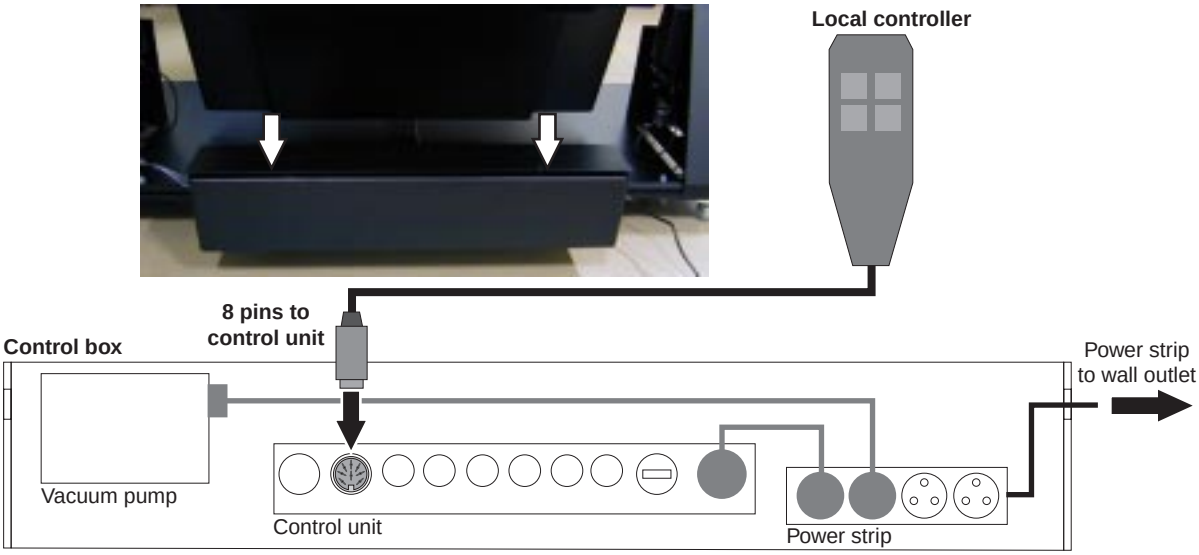


image B.1
Local controller to control unit

4 ***Warning: The stop switches preventing that the mirror cabinet exceeds its tilting/lifting limits will not work!!! Keep this in mind when tilting the projector in the vertical position.***
5 Use the keys on the local controller to tilt the mirror cabinet in a vertical position (image B.2).
6 Unplug the power cord from the wall outlet.

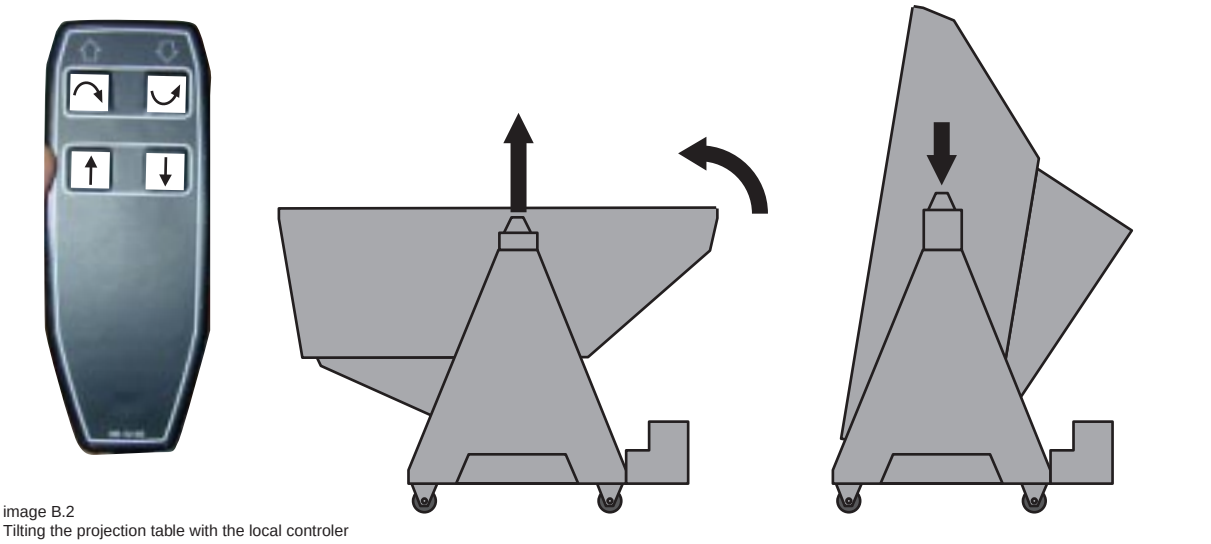


image B.2
Tilting the projection table with the local controler

Removing the mirror frame

1 Loosen the 10 bolts inside the mirror cabinet.
2 Remove the mirror frame.

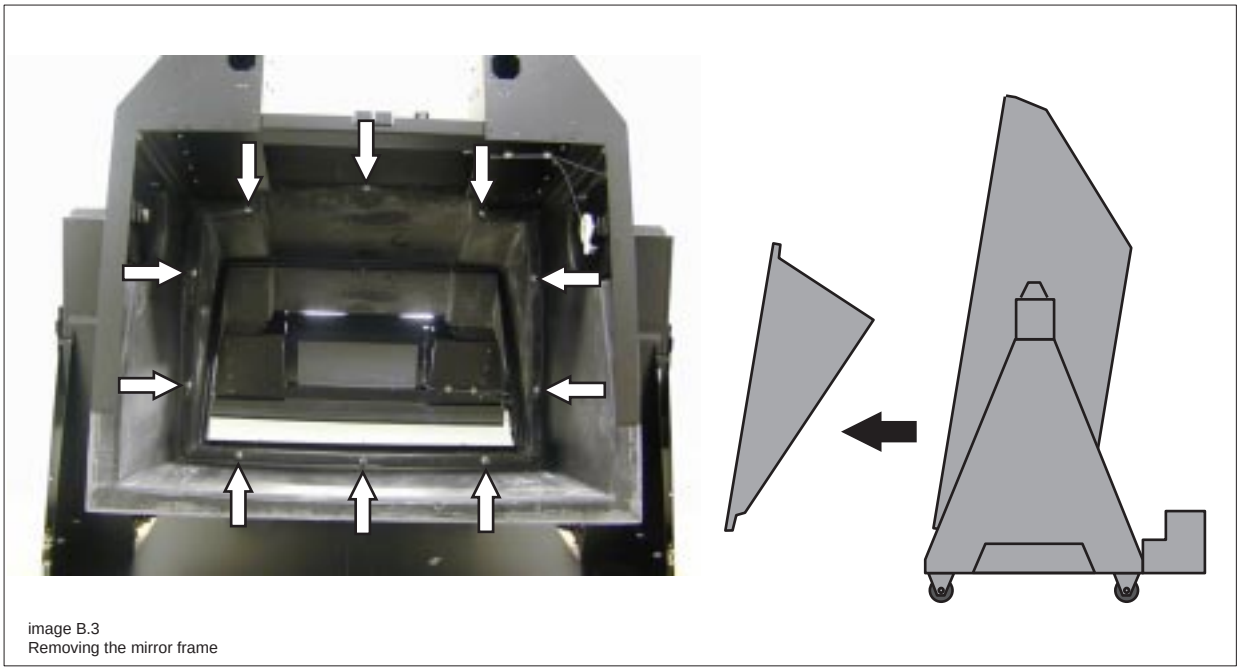


image B.3
Removing the mirror frame

Removing the control box

1 Disconnect the color marked cables from the control unit (when necessary remove cable straps) and put them out of the control box.
2 Loosen the 4 bolts and remove the control box.

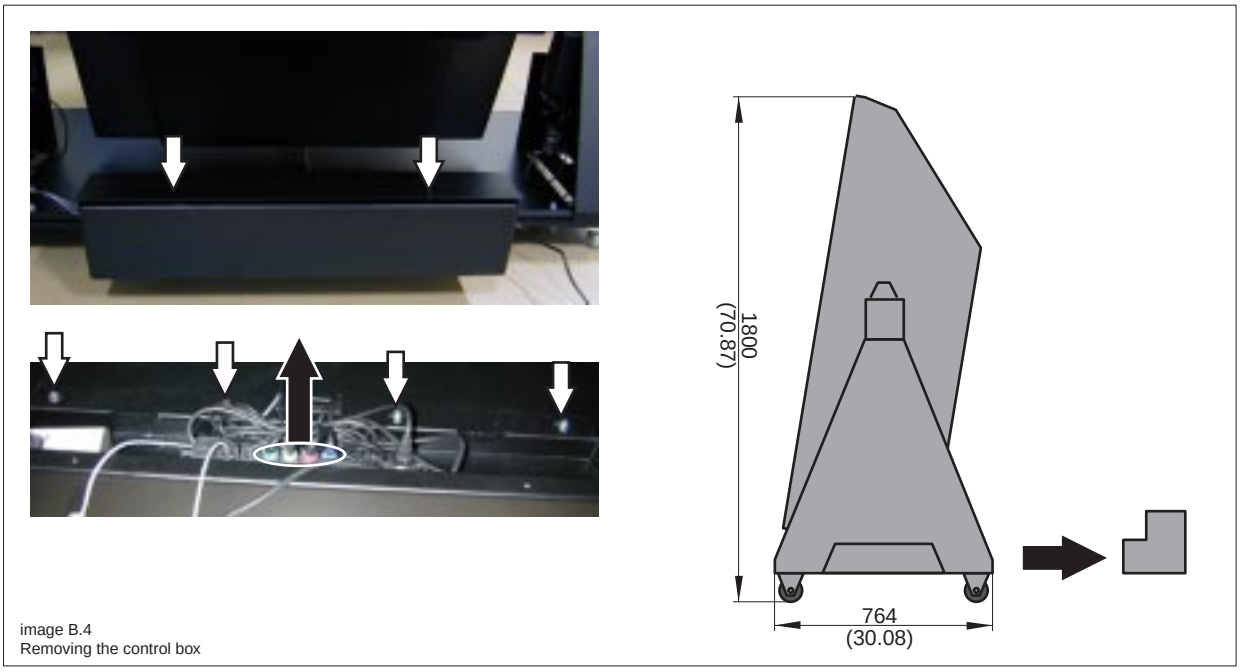


image B.4
Removing the control box

Remark:

When finished repeat the procedures above in the reverse order.

Warning: Be sure to respect the color labels when reconnecting the cables to the control unit, mechanical damage may occur when connecting cables with different color labels.

Tilt the mirror cabinet back in its initial horizontal position.

MATERIAL SAFETY DATA SHEET

Form Approved
Bureau Budget No. 45-R0338

SECTION I

MANUFACTURER'S NAME AND FSCM *(Federal Supply Code for Manufacturer's)* *BARCO N.V.*	**EMERGENCY PHONE NO.** *32-56-368211*
ADDRESS *(Number, Street, City, State, and ZIP Code)* *Noordlaan 5 B-8520 KUURNE*	
CHEMICAL NAME AND SYNONYMS *Ethylenglycol & Glycerol*	**TRADE NAME AND SYNONYMS** *Cooling liquid 512334*
CHEMICAL FAMILY *Polyalcohols*	**FORMULA** $C_2H_6O_2+C_3H_8O_3$
FEDERAL STOCK NUMBER *(FSN)*	**GROSS WEIGHT** *(LBS)* / **OUTSIDE PACKAGE DIMENSIONS (Inches)**
MIL-STD-1341/NATIONAL FIRE PROTECTION ASSOCIATION STD 704M SIGNAL **FLAMMABILITY**..... **HEALTH**..... **REACTIVITY**..... **SPECIFIC HAZARD**.....	

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, AND SOLVENTS	%	TRESHOLD LIMIT VALUE *(Units)*	ALLOYS AND METALLIC COATINGS	%	TRESHOLD LIMIT VALUE *(Units)*
PIGMENTS	/		BASE METAL	/	
CATALYST	/		ALLOYS	/	
VEHICLE	/		METALLIC COATINGS	/	
SOLVENTS	/		FILLER METAL PLUS COATING OR CORE FLUX	/	
ADDITIVES	/		OTHERS	/	
OTHERS	/				

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	TRESHOLD LIMIT VALUE *(Units)*

SECTION III PHYSICAL DATA

BOILING POINTS *(°C.)*	*201°C*	**SPECIFIC GRAVITY** *(H_2O=1)*	*1.15*
VAPOR PRESSURE *(mm Hg.)*	*3 mm Hg*	**PRECENT VOLATILE BY VOLUME** *(%)*	/
VAPOR DENSITY *(AIR=1)*	*2.2*	**EVAPORATION RATE** *(.....=1)*	/
SOLUBILITY IN WATER	∞		
APPEARANCE AND ODOR			

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT *(Method used)*	FLAMMABLE LIMITS	LOWER EXPLOSIVE LIMIT	UPPER EXPLOSIVE LIMIT
EXTINGUISHING MEDIA			
SPECIAL FIRE FIGHTING PROCEDURES			
UNUSUAL FIRE AND EXPLOSION HAZARDS			

SECTION V HEALT HAZARD DATA

TRESHOLD LIMIT VALUE *100ppm*

EFFECTS OF OVEREXPOSURE

EMERGENCY AND FIRST AID PROCEDURES

SECTION VI REACTIVITY DATA

STABILITY	**UNSTABLE**		**CONDITIONS TO AVOID**
	STABLE	X	

INCOMPATABILITY *(Materials to avoid)*

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS POLYMERIZATION	**MAY OCCUR**	X	**CONDITIONS TO AVOID**
	WILL NOT OCCUR		

SECTION VII SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Rinse with water

WASTE DISPOSAL METHOD

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specific type)*

VENTILATION	**LOCAL EXHAUST**	**SPECIAL**
	MECHANICAL *(General)*	**OTHER**

PROTECTIVE GLOVES	**EYE PROTECTION**

OTHER PROTECTIVE EQUIPMENT

SECTION IX SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

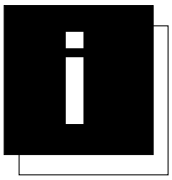
Harmful if swallowed

Keep out of the reach of children

OTHER PRECAUTIONS

To avoid from oxidants

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.
VENDOR ASSUMES NO RESPONSABILITY FOR INJURY TO VENDEE OR THIRD PERSONS PROXIMATELY CAUSED BY THE MATERIAL IF REASONABLE SAFETY PROCEDURES ARE NOT ADHERED TO AS STIPULATED IN THE DATA SHEET. ADDITIONALLY, VENDOR ASSUMES NO RESPONSABILITY FOR INJURY TO VENDEE OR THIRD PERSONS PROXIMATELY CAUSED BY ABNORMAL USE OF THE MATERIAL EVEN REASONABLE SAFETY PROCEDURES ARE FOLLOWED. FUTHERMORE, VENDEE ASSUMES THE RISK IN HIS USE OF THE MATERIAL.



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